Ainslie's patent brick and tile making machine, said to be capable of throwing off 10,000 to 20,000 bricks or tiles per day. The best we can wish this friend is a superseding of his influence by the introduction of a richer style of brickmaking and bricklaying than at present prevails, as hinted at in No. 3; the slavery and drudgery he is welcome to, if we can procure that a taste may set in for a more refined and intellectual species of workmanship on which to employ his human and *humane* competitor.

There is here also, as in other parts of the building, a model of an improved kitchen range and cooking apparatus, matters of especial regard in our eyes, knowing so much to depend upon the effective and economical character of these agents in household and house-building completeness.

Of steam-engines and steam-engine models, we have an unusual supply; many of them in action, for the sake of exhibiting their several peculiarities. We have the condensing and high-pressure, rectilineal, rotary, revolving—land and marine engines, stationary and locomotive—applied, in some instances, in connection with operations in manufactures, &c. An atmospheric and a horse engine are also exhibited, which, with an almost endless variety of models of parts and details of each, will afford much amusement and some instruction to our engineering friends.

Then there are, for the same class of inquirers, models for bridges in wood and iron, on the suspension principle, and the analogous one of tension. Models of railway-engines, carriages, and safety apparatus; and of a suspension railway. Next we have an excellent illustration of canal-locks, with the barges being lowered and raised—the gates, with their sluices—foot-bridges, &c.; indeed, a single glance from the balcony of the great hall would suffice to convince that the English were an engineering as well as a naval people. These two features of their superiority are exhibited here in the most intelligible language—the former, in what we have just adverted to, as regards engines and engine-work—the latter, in an almost endless variety of nautical models and marine apparatus, which it is not in our way, nor, perhaps, more so in the way of our friends, that we should stop to particularize.

This peculiarity, however, has its ramifications in building art, for we find in that section devoted to architecture, meagre and inferior as we must confess it to be, that no little display of maritime taste and affection, so to speak, has been called into action in this department. There are a great number of models of columns and other memorials in honour of our great naval hero, Nelson; the next, as exhibiting our peculiarity as a religious people, is in designs and models for churches; and we have these models in various materials,—ivory, cork, plaster; then we have designs for cottages in various styles, and gate lodges, and there are two propositions for the long-desired viaduct at Holborn-hill; the paucity, however, of objects of architectural interest, and of building generally, is, as we have already observed, such as to shew the necessity for a different method of exciting and developing the public and the professional taste. That we are a building people it must be admitted, and upon no paltry scale; not a nation in the world employs so large a portion of its people in the building art, and yet, while we have in this institution, as is already shewn, the very mirror of our national characteristics in some respects, in this one we see so dimly, and are reflected so feebly, that we might be tempted to deny our figures, and to say that, instead of a population of some three to five millions being dependent on building, and of five-and-twenty millions on the enjoyment and comforts to be derived from the successful practice of the building art, that we were yet a mere set of migratory adventurers. The Polytechnic Exhibition tells of a thousand appliances for locomotion on land and water, it reveals that we are a restless, run-about, and roving people; but it tells little or nothing of the truth as to the large exercise of the quality of settlers for which a great portion of our people are distinguished, nor does it, although there are some very nice cases of models of agricultural implements, say much for this section of our national peculiarity. Architecture and agriculture have been passive and unpretending, and we are afraid we must say, humbler in ability than becomes us; but a change has set in, the signs of which are so significant, and the suggestions of its necessity so strong, that we cannot walk through the Polytechnic Museum without its being obtruded upon us at every step.

We look around us almost in vain for anything pertaining to carpentry and masonry—there is nothing at all as to the bricklayer's art, unless the brick-making machine already adverted to, and two others, can be so considered;—yes, there is a relic or two of antiquity, of old Roman tesseræ or pavement, which we may assign to the bricklayer's province under the head of earthenware pavement, and from which he may derive instruction as to a process which, if cultivated, would lead to a refined species of practice in his art, as well as contribute to enlarge the sphere of employment for the increasing numbers of his craft; and we had forgotten there is one subject largely treated on, in which he is not very remotely interested—we mean as to stoves and chimneys; in the basement story there are cooking stoves repeated, and heating stoves, as well for common fuel as for gas, in which latter, as well as for the many plans and models exhibited in reference to chimneys, to fire-escapes, fire-detectors, chimney cowls, fire-extinguishers, and the like, he will take more or less interest, as his attention is brought to the philosophy of heating, ventilation, &c., which these things undoubtedly serve the good purpose of giving a stimulant to.

The mason of the higher grade may take an interest in the sculpture and statuary embellishments. There are many busts, and some statues, a few specimens of polished native granite, some Swedish porphyry, Page's new method of lettering marble, a process of mechanical sculpture, and models of implements useful to his department; such as an improved screw-jack, a patent level, &c. He may also turn his attention with profit to such matters as the model for a stone coffin and coffin-case; and even to slate-works, such as cisterns, slabs, &c., which are here exhibited. The cases also may interest him in geological products, and of the quarry; but beyond these, we cannot promise him more of a direct bearing upon his calling.

The carpenter will find two or three specimens of marqueitry or inlaid floors, a practice, by the way, that we advise him to turn his attention to, as an art it would be well to revive. His higher aims also may be directed to, and obtain encouragement from, an inspection of carving in wood. There is one specimen, said to be the handiwork of the great Michael Angelo, and another, curious from being the production of a boy of nine years old. There is something after the Elizabethan manner—but in this department no abounding—of an inferior grade; we have an improved window-sash frame, weather-tight sash fastening, and cill-bar, or sash-suspender, hinges and door fastenings, alarm-locks and trussed girders, wooden bridges, as before named, and, so far as the materials made use of and the mechanical labour go, he will have abundant occupation in looking over the many models of woodpavements—indeed, nearly all the descriptions are deposited here. From this he may pass to sawing-machines, of which there are several, and some of the inferior tools used in his calling; next to the specimen of kyanized timber, a subject demanding in no small measure his investigation, as connected with seasoning his materials; and in the kindred department of cabinet-work there are a few subjects of common interest to both; such as improved castors, door-plates, picture-rail mouldings, English japanned wood, inlaying, improved tables. Then there are a few tools; such as the improved holdfasts for chair-makers; but yet, as in the mason's department, very few.

In the plasterer's department we have various specimens of cements, fire-proof, metallic, &c.; Scagliolus, ornamental stucco, for house-fronts; but no collection of ornamental designs, modellings, or the like. There are two nice specimens of encaustic and fresco, which lead us by a transition to the painter's department; but with the exception of these, and some stained glass, together with the higher range of the painter's art, such as in pictures, there is not much to interest him. A beginning, however, has been made by the introduction of the fresco and encaustic embellishment; and if it be pursued by farther illustrations of decorative painting, as applicable to building, a considerable service would be rendered to us.

As might be expected, seeing the great mechanical preponderance, we have something for the plumber. There are varieties of pumps; and we are sure he will be deeply interested with the curious hydraulic belt, or water elevator, the zinc pipes, and drawn tubes, the process of soldering, called the patent autogeneous process;—and in glazing he will be rewarded by an inspection of various matters bearing thereon; in particular with Parr's patent ventilators, the engine turning on glass; specimens of colourless plate-glass, illuminated coal-cellar plates, Hudson's embossed glass, and the like. These, however, with a small amount of *papier maché* products, some marble paper-hangings, and a specimen of oiled paper-hangings, and a few minor and unimportant matters, must complete our list of matters to which we would direct the particular attention of our craft.

We do not, by anything we have said here, wish to have it implied that the Polytechnic Institution is not what the public encouragement and universal voice attest, and, indeed, what we set out with saying, namely, that it is an unrivalled and most admirable school, or the best of all vestibules to the school of practical art and science; but infected as we are with a disposition to measure things as they have a tendency to promote, and to correctly estimate the all-important art of building, we have given utterance to something exceptional, and only in that respect; we shall, however, return to the subject to render a sincere tribute of justice in our remarks as to the other objects of pleasure, and we may add of wonder, as well as to the valuable direct educational arrangements that are included under its roof.

TO THE EDITOR OF THE BUILDER.

SIR,—As one of the building community, I have much pleasure in saying that your publication shall have my very sincere support. My present reason in troubling you with this is, that I see some of your correspondents have taken alarm at the notice by Sir James Graham, that Government is about to introduce a Building Act, to repeal or supersede the 14 Geo. 3, c. 78, and one of your correspondents imagines this may be "a hole and corner" proceeding. It is my wish to disabuse the minds of those persons who fear that the intended bill will be detrimental to the building interests; I can assure such persons that it will be an improvement upon the old act, taking out some of the obsolete clauses, altering the thickness both of party and external walls of additional buildings (they now being required to be the same as the principal building), to the thickness of the rate the additional building itself measures; to permit inlets in party walls for soil and other pipes, which are now prohibited by the act, but permitted by the district surveyors, as a necessity grown up with the times; to extend the superficial quantum in the second and third rates; to give to the builder of a party wall, instead of as at present, only 7*l.* 15*s.* per rod, with many other improvements upon the old act, and to extend its operations to large towns, as well as the metropolis. As regards the fear that it may be a "hole and corner" proceeding, I beg to say, that the matter has been under the consideration of the Master Carpenters' Society for nearly two years past, and I have only to refer to the Parliamentary Report in the last session, before the "Building Regulation Committee," and especially that portion of the evidence given by the president (Mr. H. Biers) and other members of the society, to convince the most sceptical that a bill including the several enactments as there recommended, will be a very great improvement upon the present act. I need only further observe that a bill injurious to the building interests has but little chance of slipping through Parliament without being brought under the notice of the trade, by the committee of the society appointed for the purpose of watching the progress of any bill or bills that may be introduced in Parliament relating to the building interests.

The insertion of this in your next will oblige.

A great number of labourers in Bohemia being in considerable distress for want of employment, and from the partial failure of the harvest, his imperial majesty has given orders that the public works, to the amount of 300,000 florins, shall be immediately commenced, at the public expense.

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